

### **REMARKS**

Claims 1, 3-17 and 19-26 are pending in the application. Claims 1, 3-17, 19-21 and 26 stand rejected. Claims 2, 18, and 22-25 were previously canceled. Claims 1, 13 and 17 have been amended herein, and Claims 4, 15, 16 and 26 have been canceled herein. Therefore, Claims 1, 3, 5-14, 17 and 19-21 are now pending in the application. Support for the amendments can be found throughout the application, drawings and claims as originally filed and, as such, no new matter has been presented. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

### **APPLICANTS' INTERVIEW SUMMARY**

Applicants thank the Examiner for speaking with the undersigned on Wednesday, November 26, 2008. In this interview, proposed claim amendments were discussed, along with the cited art. No agreement was reached during this teleconference.

### **REJECTION UNDER 35 U.S.C. § 103**

Claims 1, 3-17, 19-21 and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Raevsky (U.S. Pat. No. 5,206,088; hereinafter "Raevsky") in view of Tzur (U.S. Pat. No. 4,632,865; hereinafter "Tzur"). Claims 1, 3-17, 19-21 and 26 also stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Raevsky in view of Tzur, further in view of Lazzaro (U.S. Pat. No. 3,875,106; hereinafter "Lazzaro"). These rejections are respectfully traversed.

Initially, Applicants note that Raevsky appears to disclose a method of increasing fire retardant properties. In one example, Raevsky teaches that applying an ablative material to a sheetrock, and coating the sheetrock with an intumescent paint increases flame retardant properties. Raevsky teaches that the ablative material, SM-F, is formed by roll milling the associated constituents to form a mixture, which is then compression molded into sheets. Then, Raevsky discloses that the intumescent paint is applied in two coats. In another example, Raevsky teaches the use of SM-P as an ablative material, which is formed by compression molding a paste of the SM-P into a plaster. In sum, Raevsky teaches applying a coating to a formed layer of ablative material, in which the formed layer of ablative material is formed through compression molding.

With regard to Tzur, Tzur appears to disclose a multi-layer fire retardant composition, which includes a hardener mixed completely to form the discrete layers. In this regard, Tzur teaches mixing a resin completely with a hardener in a first step, and then gradually pouring an inorganic salt into the first mixture (the resin intermixed with the hardener) and mixing the inorganic salt and the first mixture to form a second mixture. Note that Tzur teaches that the inorganic salt is intermixed with the entire first mixture, and this second mixture (the inorganic salt intermixed with the first mixture) is poured into a metal box for curing. With regard to Lazzaro, Lazzaro teaches a method of application of an ablative composition, via spraying or troweling. In contrast to Raevsky, Tzur and Lazzaro, singly or in combination, independent Claim 1 recites:

...an intumescent material intermixed with at least a portion of the sprayable ablative material to form a sprayable ablative composition, the sprayable ablative composition adapted to form a thermal protection layer for the surface;  
wherein the intumescent material is intermixed with  
**only a portion of the thickness of the sprayable ablative**

**material**, and the intumescent material is **intermixed in different quantities**, to be applied in successive layers to the surface, so that the ablative composition is formed by a series of layers with the layers **each having a different concentration of said intumescent material mixed therein** (emphasis added).

Independent Claim 13 recites:

...an intumescent material intermixed with a **second quantity of said sprayable ablative material** and operable to be applied as a second sprayed-on ablative layer on said first sprayed-on ablative layer;

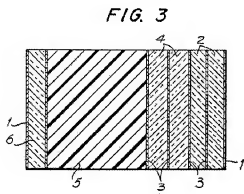
a plurality of layers comprising said intumescent material and said ablative material, each of the plurality of layers including **different concentrations of said intumescent material**, and each layer of the plurality of layers has a **successively greater concentration** of said intumescent material, wherein an **outermost layer has a maximum concentration of said intumescent material**; and

wherein said first sprayed-on ablative layer, said second sprayed-on ablative layer and said plurality of layers cooperatively form said ablative composition (emphasis added).

In view of the above discussion, Applicants respectfully assert that the cited art, singly or in combination, do not teach, suggest or disclose each and every element of independent Claims 1 and 13. As noted by the Office, Raevsky does not disclose that "the intumescent material is intermixed in different quantities, and applied in successive layers to the surface, such that each layer has a successively greater concentration of said intumescent material" (see p. 3, of Office Action mailed July 1, 2008). The Office states that Tzar remedies these shortcomings of Raevsky.

Applicants note, however, that Tzar teaches the inorganic salt is completely mixed with the binder (cement, polyester) in a cement mixer. Note that the use of a

cement mixer forms an evenly distributed mixture, and does not result in a mixture in which each layer has successively greater concentration of an intumescent material. In this regard, Tzar teaches that multiple layers are used, but does not teach that the series of layers include different concentrations of an intumescent material. In particular, with reference to Fig. 3 of Tzar, the "typical arrangement of a multi-layer structure" is shown, in which "layers 2 and 4 are the outer layers" and an aluminum foil layer (3) is disposed between each of the layers, as shown (see at least Col. 6, lines 54-60).



Note that Tzar teaches that (1) is a gauge, layer (6) is a cold face layer that is includes the mixture described in at least Examples 6, 7 and 8, and layer (5) is a "foam, either phenol-formaldehyde or polyurethane." The layers are arranged such that layer (2) has a "higher melting temperature" than layer (4), and "[t]he internal layer, No. 6, closest to the cold face [substrate], contains salt which has a melting point or dissociation temperature with the desired objective temperature or lower" (see at least Col. 9, lines 30-36). Note that layers (2), (4) and (5) do not contain the salt or intumescent material, and thus, the ablative composition of Tzur is not formed by a series of layers that each having a different concentration of an intumescent material

mixed therein, as claimed in Claims 1 and 13. Further, note that the outer layer (2) of Tzur does not have a maximum concentration of said intumescent material, as claimed in at least Claim 13.

With regard to the language of Col. 14, lines 43-50, please note that this language describes testing three layers of the cork composition of Example 6 against three layers of material commercially available from 3M. Tzur does not teach that these layers of cork include varying amounts of intumescent material, but rather teaches that the cork composition has a lower heat retention peak than the commercially available 3M material.

Regarding Lazzaro, Lazzaro does not remedy any of the above-mentioned shortcomings of Raevsky and Tzur.

Accordingly, in view of at least the above discussion, Applicants respectfully submit that the cited art does not teach, suggest or disclose each and every element of independent Claims 1 and 13, and thus, Applicants respectfully request the Office to reconsider and withdraw the rejection of independent Claims 1 and 13 under 35 U.S.C. § 103(a).

In addition, since Claims 3, 5-12, 14, 17 and 19-21 depend directly or indirectly from independent Claim 1 or 13, Claims 3, 5-12, 14, 17 and 19-21 should be in condition for allowance for at least the reasons set forth for Claims 1 and 13 above. Accordingly, Applicants respectfully request the Office reconsider and withdraw the rejections of Claims 3, 5-12, 14, 17 and 19-21 under 35 U.S.C. § 103(a).

Claims 10 and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Raevsky in view of Tzur or Raevsky in view of Tzur, further in view of Lazzaro, and further in view of Deogan et al. (U.S. Pat. No. 5,900,281; hereinafter "Deogan"). These rejections are respectfully traversed.

With regard to Claims 10 and 19, Applicants note these claims depend directly or indirectly from independent Claim 1 or 13, and thus, should be in condition for allowance for the reasons set forth for Claims 1 and 13 above. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections of Claims 10 and 19 under 35 U.S.C. § 103(a).

#### **CONCLUSION**

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the

Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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